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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
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ART UNIT	PAPER NUMBER
2687	

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _08 November 2005_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-26_ is/are pending in the application.

    4a) Of the above claim(s) _1-2_ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _3-26_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _24 July 2003_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _FEB/06/2004_.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1.   Applicant's election without traverse of **Group II, claims 3-26**, in the reply filed on

November 8, 2005 is acknowledged.

      Claims 1-2 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as

being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made **without** traverse in the reply filed on November 8, 2005.

Information Disclosure Statement

2.   The references listed in the Information Disclosure Statement filed on February 6, 2004

have been considered by the examiner (see attached PTO-1449 or PTO/SB/08A and 08B forms).

Specification / Priority

3.   The disclosure is objected to because of the following informalities: page 1, lines 3-4

make reference to a U.S. Provisional Application; however, the number provided does not match

any U.S. Provisional Application. Appropriate correction is required.

      Should Applicant intended a claim for the benefit of a prior-filed application under 35

U.S.C. 119(e) Applicant is advised that has not complied with one or more conditions for

receiving the benefit of an earlier filing date because proper claim has not been made including

problem indicated above.

Claim Objections

4.   **Claims 5 and 7-9** are objected to because of the following informalities: acronyms such

as BTS, RDCCCH, RSCACH and MS should be explained at least one in the claims to avoid

confusion. For example, -- reverse shared channel assignment channel (RSCACH) -- if intended

to be so. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6.   **Claims 10, 11, 14-16, and 20-21** rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

7.   **Claims 10-11** recite that "the number of members in the reduced active set is equal to

one", while claim 9 requires "the number of members of the reduced active set are two or more".

This is contradictory.

8.   **Claims 14-16** depend from *claims 10-11*; therefore, they contain the same problems

explained above.

9.   **Claim 16** recites the limitation "the two data rates" in line 2. There is insufficient

antecedent basis for this limitation in the claim.

10.   **Claim 20** recites that "the numbers of the members of the reduced active set is equal to

one", while claim 17 requires "the number of members of the reduced active set is greater than

one". This is contradictory.

11.   **Claim 21** depends from *claim 20*; therefore, it contains the same problems explained

above.

Claim Rejections - 35 USC § 102

12.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13.   **Claims 3, 5-6, 9-26** are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et

al. (US Patent Number 6,516,196).

Regarding **claim 3**, Chen et al. discloses a base station controller (BSC / BSC1 – Figure

1), comprising:

an active set generator (column 3, lines 15-31); and

a reduced active set (subset) generator (402 – Figure 4; column 3, lines 15-20; column 5,

lines 23-28), wherein the reduced set generator employs output of the active set generator (the

active set is used to generate the reduced set / subset) (column 4, lines 30-34; column 6, lines 53-

67; BSC perform calculations of reduced active set – column 8, lines 38-40; column 10, lines 28-

30).

Regarding **claim 5**, Chen et al. discloses everything claimed as applied above (see

rejection of *claim 3*). In addition, Chen et al. discloses wherein the BSC is configured to send

indicia of the reduced active set to a BTS (BSC communicates set to MS via BTS – column 4,

lines 14-41; column 6, lines 53-67; column 8, lines 38-40).

Regarding **claim 6**, Chen et al. discloses everything claimed as applied above (see

rejection of *claim 3*). In addition, Chen et al. discloses wherein the active set generator employs

measurements of at least one pilot channel energy strength (column 3, lines 15-20; column 6,
line 62; column 7, line 40).

Regarding **claim 9**, Chen et al. discloses an MS (Figure 1), comprising:

means for extracting information employable to determine a set of members of an active
set (column 3, lines 15-31);

means for extracting information employable to determine a set of members of a reduced
active set (subset) (402 – Figure 4; column 3, lines 15-20; column 5, lines 23-28) (the active set
is used to generate the reduced set / subset) (column 4, lines 30-34; column 6, lines 53-67; BSC
perform calculations of reduced active set – column 8, lines 38-40; column 10, lines 28-30); and

means for selecting a congestion control scheduling mode if the number of members of
the reduced active set are two or more (reduced active set is used for congestion control –
column 5, lines 43-46. Inherently if the number of members of the reduced active set are two or
more because there is no need to perform congestion control if the number is just one).

Regarding **claims 10-11, 14-16**, in view of 35 U.S.C. 112, second paragraph, problem
explained above, Chen et al. discloses everything claimed as applied above (see rejection of
claim 9). In addition, Chen et al. further discloses means for selecting an explicit scheduling
mode if the number of members of the reduced active set is equal to one; or means for selecting a
congestion control mode if the number of members in the reduced active set is equal to one (see
citations above).

The MS is configured to extract a reverse link channel data rate from the explicit control
data rate channel. The MS is configured to extract reverse link channel data rate from the
congestion control data rate channel. And transmit over a reverse link at the lower of the two

data rates extracted from a plurality of congestion control channels (once data rate is determined

MS transmits via reverse link at the given data rate – abstract; column 3, lines 1-31; column 7,

lines 1-24; *inter alia*).

Regarding **claim 12-13**, Chen et al. discloses everything claimed as applied above (see

rejection of *claim 9*). In addition, Chen et al. discloses means for receiving a plurality of explicit

data rate mode channels; and means for selecting one of a plurality of explicit data rate mode

channels (abstract; column 3, lines 15-31, *inter alia*).

Regarding **claim 17**, Chen et al. discloses a method for dynamically switching between

explicit reverse link channel data rate control and reverse link channel data rate congestion

control, comprising:

generating a reduced active set (subset) (402 – Figure 4; column 3, lines 15-20; column 5,

lines 23-28) (the active set is used to generate the reduced set / subset) (column 4, lines 30-34;

column 6, lines 53-67; BSC perform calculations of reduced active set – column 8, lines 38-40;

column 10, lines 28-30);

transmitting indicia of the reduced active set to an MS (BSC communicates set to MS via

BTS – column 4, lines 14-41; column 6, lines 53-67; column 8, lines 38-40); and

if the number of members of the reduced active set is greater than one, transmitting

reverse link channel data rate control information in congestion control mode (reduced active set

is used for congestion control – column 5, lines 43-46. Inherently if the number of members of

the reduced active set is greater than one because there is no need to perform congestion control

if the number is just one).

Regarding **claim 18-19**, Chen et al. discloses everything claimed as applied above (see

rejection of *claim 17*). In addition, Chen et al. discloses wherein the step of generating a reduced

active set employs the members of an active set (column 3, lines 15-31). And extracting data rate

information in congestion control mode by a mobile station (reduced active set is used for

congestion control by a mobile station – column 5, lines 43-46).

Regarding **claims 20-21**, in view of 35 U.S.C. 112, second paragraph, problem explained

above, Chen et al. discloses everything claimed as applied above (see rejection of *claim 17*). In

addition, Chen et al. further discloses wherein if the numbers of the members of the reduced

active set is equal to one, transmitting reverse link channel data rate control information in a

explicit control mode. And extracting data rate information in explicit mode by a mobile station

(see citations above).

Regarding **claim 22**, Chen et al. discloses a system for setting a reverse link channel data

rate through use of an active set and a reduced active set, comprising:

at least one base transceiver station (BTS – Figure 1; column 4, lines 14-66); and

a base station controller (BSC – Figure 1; column 4, lines 14-66) coupled to each of the at

least one BTSs, the BSC configured to generate the reduced active set (subset) (402 – Figure 4;

column 3, lines 15-20; column 5, lines 23-28) (the active set is used to generate the reduced set /

subset) (column 4, lines 30-34; column 6, lines 53-67; BSC perform calculations of reduced

active set – column 8, lines 38-40; column 10, lines 28-30).

Regarding **claim 23**, Chen et al. discloses everything claimed as applied above (see

rejection of *claim 22*). In addition, Chen et al. discloses wherein the BTS is coupled to a BTS

distribution logic (Figure 1; column 4, lines 14-66).

Regarding **claims 24-26**, they are corresponding computer program product, processor

and system claims of method *claim 17*; therefore, they are rejected for the same reasons shown

above.

Claim Rejections - 35 USC § 103

14.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

15.   **Claims 4** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (US

Patent Number 6,516,196) in view of Rohani (US Patent Number 5,999,522).

Regarding **claim 4**, Chen et al. discloses everything claimed as applied above (see

rejection of *claim 3*). In addition, Chen et al. discloses wherein the reduced set generator

employs forward link channel signal strength to determine members of the reduced active set

(signal strength received at MS from BTS – column 3, lines 15-20).

However, Chen et al. fails to specifically disclose that the reduced active set is further

determined based on reverse link channel signal strength measurements (signal strength received

at BTS from MS) as claimed. Nevertheless, the technique of using both reverse and forward link

channel signal strength measurements is conventional in the art for the advantage of obtaining

more accurate results, and Rohani is just evidence of the fact.

Rohani discloses a reduced active set generator where both reverse and forward link

channel signal strength measurements are used to determined the set (forward link: the mobile

station measures the strength of pilot signals which then are used as a criteria to create a list of

possible candidate pilot signals for future hand-off – column 1, lines 46-49) (reverse link:

determining the candidate list / reduced active set includes measuring reverse link signal which

are received at said plurality of sectors / base stations – abstract of Rohani).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

the invention was made to use both reverse and forward link channel signal strength

measurements as claimed for the advantage of obtaining more accurate results.

16.   **Claims 7-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al.

(US Patent Number 6,516,196) in view of the Admitted Prior Art (Background of the Invention,

page 2 of present disclosure).

Regarding **claims 7-8**, Chen et al. discloses everything claimed as applied above (see

rejection of *claim 3*). However, Chen et al. fails to specifically disclose wherein the BSC

commands an RDCCCH or RSCACH channel to be used if the number of entries in the reduced

active set is greater than one.

The prior art admitted by applicant under the Background of the Invention, page 2 of

present disclosure (simply "Admitted Prior Art" herein) teaches these are particular requirements

of conventional CDMA systems. Because Chen et al.'s system is in fact a CDMA system

(column 1, lines 31-33), both teachings are combinable.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

the invention was made to provide Chen et al.'s invention with the BSC commanding an

RDCCCH or RSCACH channel to be used if the number of entries in the reduced active set is

greater than one in order to comply with system requirements as taught by the Admitted Prior

Art and also because this would have been the best engineering design choice.

Conclusion

17.   Any inquiry concerning this communication from the examiner should be directed to
Eliseo Ramos-Feliciano whose telephone number is 571-272-7925. The examiner can normally
be reached from 8:00 a.m. to 5:30 p.m. on 5-4/9 1st Friday Off.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Lester G. Kincaid, can be reached on (571) 272-7922. The fax phone number for the
organization where this application or proceeding is assigned is 571-273-8300.

        Information regarding the status of an application may be obtained from the Patent
Application Information Retrieval (PAIR) system. Status information for published applications
may be obtained from either Private PAIR or Public PAIR. Status information for unpublished
applications is available through Private PAIR only. For more information about the PAIR
system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR
system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ELISEO RAMOS-FELICIANO   1/21/06
PATENT EXAMINER

ERF/erf
January 21, 2006